This listing of claims will replace all prior versions, and listings, of claims in the

application.

1-27. (Cancelled)

28. (Previously Presented) A method of utilizing a triggerably releasable delivery

system, the method comprising administering to a mucosal membrane of a patient a

plurality of nanoparticles containing silica coated with alumina and having a size of

about 500 nanometers or less, wherein the alumina provides a site on a surface of the

nanoparticles to which is bonded a functional compound, wherein the nanoparticles

possess a zeta potential of about 20 millivolts or more, wherein the nanoparticles are

contained within a vehicle that further comprises a pH altering material, and wherein the

functional compound is released from the surface of the nanoparticles upon exposure to

a change in pH.

29. (Cancelled)

30. (Previously Presented) The method of claim 28, wherein the nanoparticles

posses a zeta potential of about 30 millivolts or more.

31. (Previously Presented) The method of claim 28, wherein the nanoparticles

posses a zeta potential of about 40 millivolts or more.

32. (Cancelled)

33. (Previously Presented) The method of claim 28, wherein the functional

compound is an anti-microbial agent, anti-viral agent, or a combination thereof.

34. (Previously Presented) The method of claim 28, wherein the functional

compound is a therapeutic agent.

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35. (Previously Presented) The method of claim 28, wherein the functional compound contains a moiety comprising:

or a tautomer thereof, or a functional equivalent thereof, wherein R and R' comprise independently hydrogen, an alkyl group, or an aryl group.

- 36. (Cancelled)
- 37. (Previously Presented) The method of claim 28, wherein the vehicle is a liquid.
  - 38. (Previously Presented) The method of claim 28, wherein the vehicle is a gel.
  - 39. (Cancelled)
- 40. (Previously Presented) The method of claim 28, wherein the nanoparticles are located on a substrate prior to administration to the patient.
  - 41. (Cancelled)
- 42. (Previously Presented) The method of claim 28, wherein the change in pH involves a change from an acidic to an alkaline pH.
- 43. (Previously Presented) The method of claim 28, wherein the change in pH involves a change from an alkaline to an acidic pH.
- 44. (Previously Presented) The method of claim 28, wherein the nanoparticles are topically administered.

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- 45. (Cancelled)
- 46. (Previously Presented) The method of claim 28, wherein the mucosal membrane is located in the vagina of a female.
  - 47-61. (Cancelled)
- 62. (Previously Presented) The method of claim 28, wherein the pH altering material includes an acid.
- 63. (Previously Presented) The method of claim 28, wherein the pH altering material includes a base.
- 64. (Previously Presented) The method of claim 28, wherein the functional compound contains the following moiety:



- 65. (Previously Presented) The method of claim 64, wherein the functional compound includes tetracycline.
- 66. (Withdrawn) The method of claim 64, wherein the functional compound includes baicaline hydrate, baicalein, daunorubicin, or a combination thereof.
- 67. (Withdrawn) The method of claim 64, wherein the functional compound includes salicylanilide, salacetamide, salsalate, albofungin, or a combination thereof.